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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/854,321

05/11/2001

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12/01/2004

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EXAMINER

LY, ANH VU H

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,321

Applicant(s)

GROSDIDIER ET AL.

Examiner

Anh-Vu H Ly

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because paragraph number “[0068]” should be deleted and in line 5, “form” should be changed to - -from- -. Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claims 1 and 15 are objected to because of the following informalities:

With respect to claim 1, a period should be inserted at the end of the claim.

With respect to claim 15, in line 2, “fouwer transform” should be changed to - -fourier transform- -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5-14, 16-18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilson (US Pub 2001/0032269 A1).

With respect to claims 1, 10, and 16, Wilson discloses on page 7, 58th paragraph, that ACKs are generated by the receiving TCP host and sent to the sending TCP host to be analyzed. The ACK is examined for a marked congestion bit showing that a specific data packet was

marked (information regarding congestion conditions within the network). In this way, a round trip time (RTT) for the transmission of a specific data packet may be determined by examining the ACK containing data regarding the specific data packet (measuring packet round trip times within a communication network and extracting from RTT information regarding congestion conditions within the network).

With respect to claims 2 and 11, Wilson discloses in Fig. 8, a graph illustrates the average network latency. Herein, latency is the amount of time from the first instance a particular packet is transmitted until the final acknowledgement of its correct reception (wherein RTT measurements are organized as an invariant distribution prior to the extracting of information regarding congestion conditions).

With respect to claims 3, 14, and 18, Wilson discloses on page 9, 73rd paragraph, that the average and standard deviation of RTT was measured using IETF recommended algorithm (wherein extraction of information regarding congestion condition is performed using an analytical tool which reveals periodicity information in the invariant distribution).

With respect to claims 5 and 12, Wilson discloses in Fig. 8, a graph illustrates the average network latency comprising dots indicating congestions within the network (wherein extraction of information regarding congestion conditions comprises determining period information of the information organized as s the invariant distribution).

With respect to claim 6, Wilson discloses in Fig. 7, a graph illustrates the TCP throughput of the network (wherein extraction of information regarding congestion conditions further comprises determining bandwidth information of the information organized as the invariant distribution).

With respect to claims 7, 9, and 17, Wilson discloses on page 5, 46th paragraph, that the TCP host keeps track of the sent data packets and waits for a round trip time to be completed for each of the data packets. The sending TCP host then either increases or decreases the data transmission rate upon receiving ACKs (using the bandwidth information to set a control bandwidth output of a network node).

With respect to claims 8, 13, and 20, Wilson discloses on page 5, 47th paragraph, that after an acknowledgment is received and the data transfer rate is adjusted (control bandwidth output is set by adjusting inter-packet transmission times at the network node).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (US Pub 2001/0032269 A1) in view of Aweya et al (US Patent No. 6,584,111 B1).

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With respect to claims 4, 15, and 19, Wilson discloses in Fig. 8, a graph illustrates the average network latency. Wilson does not disclose wherein the analytical tool is selected from the list comprising a Fourier transform and a wavelet transform. Aweya discloses in Fig. 8, a flow control system includes a wavelet-based traffic filtering mechanism. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the wavelet-based traffic filtering mechanism in Wilson's system, as suggested by Aweya, to transform a time domain function into a representation that is not only localized in frequency but in time as well.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aoki et al (US Patent No. 6,757,255 B1) discloses apparatus and method of measuring communication performance.

Ono (US Pub 2001/0015956 A1) discloses packet size control technique.


Grosdidier et al (US Pub 2002/0159386 A1) discloses method for dynamical identification of network congestion characteristics.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 11/29/09